

Claims 1-3 and 5 were rejected under 35 USC 102(b) in view of published U.S. Patent Appl. No. 2003/0063888 A1 to Sahlin et al. With respect to claim 1, the Examiner asserted that the Salin et al. reference discloses an optical fiber measuring module to be laid on a structure for measuring at least one physical quantity. The Examiner noted that FIG. 6 of Salin et al. has an optical fiber cable 130, a base member 118 for holding the optical fiber cable 130 and an attachment member 112 for attaching the base member 118 to the structure. The Examiner concluded that the base member 118 of Salin et al. is configured for being attached to the attachment member while the base member is holding the optical fiber cable. To support this assertion, the Examiner cited paragraphs 0027 and 0028 of the Salin et al. disclosure. With respect to claim 2, the Examiner asserted that the Salin et al. reference has an attaching device between the attachment member 112 and the structure for attaching the attachment member to the structure. The Examiner further concluded that the Salin et al. reference has a locking device 104, 106 between the base member 118 and the attachment member 112 for locking the base member 118 in the attachment member 112. With respect to claim 3, the Examiner asserted that the Salin et al. reference has an adhering layer on the attachment member 112 made of an adhesive or welding agent for adhering the attachment member 112 to the structure. With respect to claim 5, the Examiner asserted that the Salin et al. reference discloses that the locking device locks the base member 118 by the engagement of the engaging portions 114, 116 with locking portions 128 of the attachment member 112. The Examiner's conclusions regarding the relevancy of Salin et al. are described further on page 8 of the detailed action where the Examiner quotes from paragraph 0028 of the Salin et al. reference.

The portion of the Salin et al. reference relied upon by the Examiner clearly indicates that the Salin et al. channel 100 is mounted to the mounting member 112 before the cable 130 is mounted in the channel 100. Paragraph 0028 of Salin et al. merely indicates that some sliding movement of the channel 100 relative to the mounting member 112 is possible to accommodate differential thermal expansion. However, this slight sliding movement to accommodate differential thermal expansion clearly is entirely unrelated to the mounting of the channel 100 on the mounting member 112 or the mounting of the cable 130 to the channel 100. The interpretation of Salin et al. proposed by the Examiner requires the assembly of Salin et al. channel 100 and cable 130 to be slid longitudinally along the length of the attachment member 112. The optical fiber 130, of course, can be very long, and hence the interpretation of Salin et al. that supports the rejection requires a very long and unrealistic sliding movement of the channel 100 relative to the attachment member 112. This long sliding movement certainly is not realistic and is clearly inconsistent with the teaching of Salin et al. which specifies that the channel 100 is firmly attached to the mounting member 112 in a direction transverse to the channel 100.

Conceivably, the Salin et al. reference could be adopted by using a plurality of channels 100 that are spaced apart along the length of the cable 130. This hypothetical option might facilitate a slidable attachment of the channels 100 to an attachment member 112. The shorter channels 100 then could be slid sequentially onto the attachment member 112. However, this mounting method necessarily would impose forces on the cable between adjacent channels 100 as part of the mounting process. These forces would create a very substantial likelihood of breaking the cable between the channels 100 as part of the process of mounting the assembly of channels 100 and a cable 130 to one or more mounting members 112. The Salin et al. reference could not be interpreted as

teaching an arrangement that would damage or destroy the cable that arguably is retained in the channel 100 while the channel is being mounted to the attachment member 112.

The Examiner will also appreciate that an optical fiber measuring module requires a fixed retention of the optical fiber cable so that the measurements can be performed. This fixed retention of the cable for an optical fiber measuring module is inconsistent with the interpretation of Salin et al. that emphasizes sliding movement between the channel 100, the optical fiber 130 and the attachment member 112.

In view of the above, it is submitted that no reasonable interpretation of Salin et al. could be considered to anticipate the invention defined by previously presented claims 1-3 and 5.

Claim 1 was rejected under 35 USC 102(b) as being anticipated by U.S. Patent No. 5,594,819 to Narendran et al. The Examiner specifically relied upon FIG. 2C of Narendran et al., and stated that the Narendran et al. reference shows an optical fiber 40 and an attachment member 48 for attaching the base member 44 to a structure. The Examiner concluded that the base member 44 is configured for being attached to the attachment member 48 while the base member 44 is holding the optical fiber cable 40.

The element 44 of Narendran et al. is identified as a metal sheath or tube that may be provided to improve ruggedness when the sensor is used in a hostile environment, such as a steam generator. The interpretation of Narendran et al. described in the office action requires the metal tube 44 of Narendran et al. to hold the optical fiber cable 40. However, the Narendran et al. reference has no suggestion that the metal tube 44 holds the optical fiber cable 40. In fact, FIG. 2C of Narendran et al. suggests that the metal tube 44 and the cover plate 56 both are spaced outwardly from the optical fiber cable 40 to provide protection and ruggedness without "holding". Of course, the optical

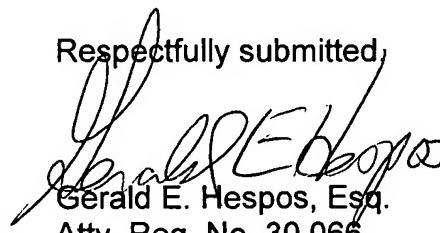
fiber cable 40 and the metal tube 44 of Narendran et al. each would require some form of attachment to the shim 48 and/or the structure of interest 52. However, a "holding" of the optical fiber cable 40 by the metal tube 44 is not required, is not suggested and presumably would have a very significant effect on the ability of the optical fiber cable 40 to measure strain in the structure of interest 52. A reference cited under 35 USC 102 must have a very specific teaching and must be enabling. The Narendran et al. reference does not teach that the metal tube 44 holds the optical fiber cable 40 and is not enabling for such an interpretation.

The interpretation of Narendran et al. also would require the metal tube 44 and optical fiber cable 40 to be attached to the shim 48 and the cover plate 56 by inserting the metal tube 44 into a tunnel formed between the shim 48 and the cover plate 56. However, an optical fiber cable invariably has a considerable length and that entire length of the optical fiber cable must be slid or otherwise advanced through the space between the shin 48 and the cover plate 52. This arrangement would not appear to be realistic or workable, and certainly is not suggested by Narendran et al. Conceivably, a plurality of pairs of shims 48 and cover plates 56 could be fixed on a structure, and the optical fiber 40 could be threaded sequentially and intermittently through these respective pairs of shims 48 and cover plates 56. However, this awkward arrangement is not suggested by Narendran et al. and still would require the unlikely threading of the optical fiber cable along its entire length. Accordingly, Narendran et al. cannot be considered to teach an arrangement where the metal tube 44 is attached to the shim 48 while the middle tube 44 is holding the optical fiber cable 40. Accordingly, it is submitted that Narendran et al. cannot be considered to teach the invention defined by previously presented claim 1.

Claims 7, 8 and 10-16 were rejected under 35 USC 103(a) as being obvious over Narendran et al. considered in view of secondary references. None of these secondary references, however, overcome the deficiencies of Narendran et al. as explained above.

In view of the preceding amendments and remarks, it is submitted that claims 1-3, 5, 7, 8 and 10-16 are directed to patentable subject matter and should be allowed along with the previously allowed claims 4, 6, 9, 17 and 18. The Examiner is urged to contact applicants attorney at the number below to expedite the prosecution of this application.

Respectfully submitted,



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